

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

A1 1. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n ( $n$  is an integer  $\geq 2$ ), gates of  $n$  light-emitting thyristors included in each block are separately connected to  $n$  gate-selecting lines, and anodes or cathodes of  $n$  light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

a wiring layout where ~~wirings not to be electrically shorted are crossed~~ crossed wirings is are implemented by a two-layer wiring structure, to avoid electrical shorts.

2. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n ( $n$  is an integer  $\geq 2$ ), anodes or cathodes of  $n$  light-emitting thyristors included in each block are separately connected to  $n$  anode-selecting lines or cathode-selecting lines, and gates of  $n$  light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

a wiring layout where ~~wirings not to be electrically shorted are crossed~~ crossed wirings is are implemented by a two-layer wiring structure, to avoid electrical shorts.

3. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n ( $n$  is an integer  $\geq 2$ ), gates of  $n$  light-emitting thyristors included in each block are separately connected to  $n$  gate-selecting lines, and anodes or cathodes of  $n$  light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

a wiring layout where ~~wirings not to be electrically shorted are crossed~~ crossed wirings is are implemented by utilizing gate electrodes of the light-emitting thyristors as cross under wirings, to avoid electrical shorts.



4. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n (n is an integer  $\geq 2$ ), anodes or cathodes of n light-emitting thyristors included in each block are separately connected to n anode-selecting lines or n cathode-selecting lines, and gates of n light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

a wiring layout where ~~wirings not to be electrically shorted are crossed~~ crossed wirings is are implemented by utilizing anode electrodes or cathode electrodes of the light-emitting thyristors as cross under wirings, to avoid electrical shorts.

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5. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n (n is an integer  $\geq 2$ ), gates of n light-emitting thyristors included in each block are separately connected to n gate-selecting lines, and anodes or cathodes of n light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

bonding pads ~~are~~ arrayed in parallel with the array direction of the light-emitting thyristors and on one side of the array of the light-emitting thyristors, and

a wiring layout where ~~wirings to a~~ crossed wiring between the bonding pads cross and the gate-selecting lines is implemented by utilizing, as a cross under wiring, electrodes at least one of an anode electrode and a cathode electrode on an ~~on~~ islands that is isolated from the light-emitting thyristors as cross under wirings, to avoid electrical shorts.

6. (Currently Amended) The light-emitting thyristor matrix array of claim 5, wherein the electrodes on the islands isolated from the light-emitting thyristors ~~are~~ include at least one of a gate electrodes, an anode electrodes, ~~or and a~~ cathode electrodes.

7. (Currently Amended) The light-emitting thyristor matrix array of claim 5, wherein at least one of the anode electrode ~~or and~~ cathode electrode is utilized as the cross under



wiring, and at least one of the anode electrode or and cathode electrode is electrically shorted to the gate electrode on the same isolated island.

8. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n ( $n$  is an integer  $\geq 2$ ), gates of  $n$  light-emitting thyristors included in each block are separately connected to  $n$  gate-selecting lines, and anodes or cathodes of  $n$  light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

bonding pads ~~are~~ arrayed in parallel with the array direction of the light-emitting thyristors and on one side of the array of the light-emitting thyristors, and

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cont. a wiring layout where ~~wirings to a~~ crossed wiring between the bonding pads cross and the gate-selecting lines is implemented by utilizing, as a cross under wiring, a gate electrode elongated around a light-emitting portion of the thyristor as a cross under wiring, to avoid electrical shorts.

9. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n ( $n$  is an integer  $\geq 2$ ), gates of  $n$  light-emitting thyristors included in each block are separately connected to  $n$  gate-selecting lines, and anodes or cathodes of  $n$  light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

bonding pads ~~are~~ arrayed in parallel with the array direction of the light-emitting thyristors and on one side of the array of the light-emitting thyristors, and

a wiring layout where ~~wirings to a~~ crossed wiring between one of the bonding pads cross and one of the gate-selecting lines is implemented by utilizing two gate electrode parts provided around a light-emitting portion of the thyristor as a cross under wiring, the two gate electrode parts being electrically connected by an underlying gate layer, to avoid an electrical short.



10. (Currently Amended) A light-emitting thyristor matrix array wherein an array of three-terminal light-emitting thyristors in which a substrate that is used as a common cathode or anode is divided into blocks of n by n (n is an integer  $\geq 2$ ), anodes and cathodes of n light-emitting thyristors included in each block are separately connected to n anode-selecting lines or cathode-selecting lines, and gates of the n light-emitting thyristors included in each block are commonly connected to one terminal, respectively, characterized ~~in that~~ by:

bonding pads ~~are~~ arrayed in parallel with the array direction of the light-emitting thyristors and on one side of the array of the light-emitting thyristors, and

A1 { a wiring layout where ~~wirings to crossed wirings between the bonding pads cross and ones of the anode-selecting lines or and cathode-selecting lines is are~~ implemented by utilizing, as cross under wirings, electrodes on islands that are isolated from the light-emitting thyristors ~~as cross under wirings, to avoid electrical shorts.~~

11. (Original) The light-emitting thyristor matrix array of claim 10, wherein the electrodes on the islands isolated from the light-emitting thyristors are gate electrodes, anode electrodes, and cathode electrodes.

12. (Currently Amended) The light-emitting thyristor matrix array of claim 11, wherein at least one of the anode electrodes or and the cathode electrodes is utilized as the cross under wiring, and the at least one of the anode electrodes or and the cathode electrodes is electrically shorted to the gate electrode on the same isolated island.